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DURSLEY RURAL DISTRICT COUNCIL.

MINISTRY OF HEALTH LIBRARY

ANNUAL REPORT

OF THE MEDICAL OFFICER OF HEALTH FOR 1943.

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Sanitary Inspector - W.H. Williams, M.R.S.I.

SECTION A. STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (acres)	26,905
Population (Census, 1931)...	14,400
(Estimated 1943)	16,800
Number of inhabited houses (Census, 1931) ...	3,788
(end of 1943) ...	4,960
Rateable Value	63,199
Sum represented by a penny rate	258

Extracts from Vital Statistics.

	Total.	M.	F.
Live Births:			
Legitimate	289	138	151
Illegitimate	8	4	4

Birth Rate: 17.7

	Total.	M.	F.
Still Births (all legitimate) ...	8	4	4

Rate per 1,000 total (live and still)
Births: 26.2

	Total.	M.	F.
Deaths	187	88	99

Death Rate: 11.1

Number of women dying in, or in consequence of childbirth

from sepsis ... 0
from other causes 2

RATE per 1000 total (live and still) births - 6.56

Deaths of infants under one year -

	Total.	M.	F.
	13	7	6
Legitimate	13	7	6
Illegitimate	0	0	0

Death Rate of Infants under one year of age:-

All Infants per 1000 live births - 44
Legitimate Infants per 1000 legitimate live births - 45
Illegitimate Infants per 1000 illegitimate live births - Nil.

Deaths from Measles (all ages)	0
" " Whooping Cough (all ages)... ...	1
" " Diarrhoea (under 2 years)... ...	0
" " Cancer (all ages)	34

Social Conditions of the District.

These remain the same as in previous years.

CAUSES OF DEATH IN 1943.

DISEASE.	M.	F.
1. Typhoid and Paratyphoid Fevers.	0	0
2. Cerebro-spinal fever	0	0
3. Scarlet Fever	0	0
4. Whooping Cough	1	0
5. Diphtheria	0	0
6. Tuberculosis of Respiratory system	3	4
7. Other forms of tuberculosis	0	0
8. Syphilitic diseases	0	1
9. Influenza	0	6
10. Measles	0	0
11. Ac. Polio-myel. and polio-enceph.	0	0
12. Ac. inf. enceph.	0	1
13. Cancer of B. cav. and Oesoph (M) Uterus (F)	2	1
14. Cancer of stomach and duodenum	5	2
15. Cancer of breast	0	7
16. Cancer of other sites	5	12
17. Diabetes	1	0
18. Intracranial vascular lesions	4	9
19. Heart disease	25	23
20. Other diseases of circ. system	2	0
21. Bronchitis	7	3
22. Pneumonia	5	3
23. Other respiratory diseases	2	0
24. Ulcer of stomach or duodenum	2	0
25. Diarrhoea under 2 years	0	0
26. Appendicitis	0	0
27. Other digestive diseases	3	2
28. Nephritis	4	2
29. Puer. and post-abort. sepsis	0	0
30. Other maternal causes	0	2
31. Premature birth	3	3
32. Con. Mal.; birth inj.; infant. dis.	3	3
33. Suicide	0	1
34. Road traffic accidents	0	0
35. Other violent causes	3	1
36. All other causes	8	13
TOTALS	88	99

SECTION B. WATER SUPPLY.

Parish	Population	Houses on Water Supply	Houses not on Water Supply	Total Houses
Cam	2,800	740	117	857
Dursley	5,315	1,474	20	1,494
Uley	1,242	222	80	312
Nympsfield	370	60	11	71
Slimbridge	850	174	80	254
North Nibley	750	117	120	237
Stinchcombe	450	90	32	122
Coaley	675	112	83	195
Wotton-u-Edge	3,450	990	76	1,066
Kingswood	850	244	62	306
Owlpen	48	-	16	16

All parishes with the exception of Owlpen have a piped supply of water and with the exception of the parish of Coaley it is supplied directly to the houses.

Owlpen.

In Owlpen the 16 houses occupied by 48 persons have separate supplies which are sufficient. The quality is not known as samples have not been examined.

Dursley.

The parishes of Dursley, Cam, Uley, Nympsfield, Slimbridge and Stinchcombe received their supply from springs at Caswell, Dursley and the quality is highly satisfactory. The report on a sample of untreated water examined on 11th October 1943 is as follows:-

Number of colonies per ml of original water
developing at 37° = 26
at 20·22° = 18
Probable number of Coli-Aerogenes organisms per 100ml of
original water = 0

Unfortunately this supply was insufficient from May onwards and the position is the higher parts of the district became acute in July, August and September. From 1st October it was augmented by a supply from Millend, carried out at a cost of £4,700. The two sources of supply appear to be adequate for the present needs of these parishes but the Council are negotiating to acquire further springs at Binley.

As stated in my last Annual Report, bacteriological examination of the Millend supply showed evidence of faecal pollution in 8 consecutive samples. Further unsatisfactory reports were received on samples taken in January and February. An inspection of the drainage from a nearby cottage showed a slight leakage and the defective drain was repaired on 8th April. Three samples submitted on 14th, 21st and 28th April were satisfactory on bacteriological examination but samples repeated after heavy rain on the 2nd and 9th June showed the presence of faecal B. Coli. A further test of the section of the drain nearer the cottage revealed a serious leakage which was remedied immediately but the quality of the supply remained unsatisfactory.

On June 29th the Council instructed Mr. L. Richardson, F.R.S.E., P.A. Inst. W.E., of Bewdley, Worcs. to investigate from a geological standpoint the Millend Spring with a view to ascertaining the cause of the pollution and his report, dated 6th August is as follows:-

"I investigated the Spring and its surroundings on July 20th, and 21st., and was accompanied by your Medical Officer of Health and Surveyor.

The geological names for the rock-formation in this neighbourhood, in descending order, are:-

Great Oolite.
Fullers' Earth.
Inferior Oolite.
Cotteswold Sands.
Upper Lias Clay. Clay with occasional thin layers of clayey Limestone.
Middle Lias (a) Marlstone or Rock Bed: from 15 to 20 feet thick.
(b) "Sandy Beds". Mostly clayey here.
Lower Lias. Probably several hundred feet in thickness and practically waterless.

The main Millend Spring, the source of the Supply, comes from the Marlstone. It originally discharged into the stream, but for the purpose of the supply has been intercepted by two Wells of equal depth in

Hillwash consisting of weathered Upper Lias clay and pieces of Inferior Oolite and Upper Lias Limestones ... 6 to 7 ft.

Marlstone, Brown-weathering, blue-hearted impure Limestone fissured: penetrated to a depth of ... 14 ft.

from which the water is piped to the pumping-sump.

The marlstone is seen cropping out at the top of the bank below Millend Farm, and of course, although hidden, continuos to the eastward, in which direction it is pierced by the Wells. Further into the hill side, which rises above the Farm and Wells, the Upper Lias Clay (which succeeds the Marlstone) prevents, in the absence of faults, the downward passage into the Marlstone of water from the Cotteswold Sands, etc.; but in the neighbourhood of the Wells, as proved by a trench, the Marlstone is locally covered by pervious hillwash and is bare at the top of the bank below Millend Farm.

The sanitary arrangements at the house on the north side of the road roughly above the spring and wells were at one time unsatisfactory; but subsequent work that has been carried out has probably proved effective in eliminating this source of pollution. The fissures in the Marlstone and ground, however, take time to cleanse.

The present arrangement for the sewage disposal at Millend Farm is not satisfactory; the effluent runs down the bank below the farm, over the outcrop of the fissured Marlstone, and gives rise to a veritable quagmire. It is highly probable that some of this gets into the Marlstone. The site where this influent seepage is probably taking place in between the wells (to the east) and a roadside spring (to the west). It is said locally that in the past by blocking up the Millend Spring, this road-side spring could be made to flow; also that the collecting of the Millend Spring has interfered with its flow. This interference is quite likely from a geological standpoint and renders understandable how pollution introduced at an intermediate site could affect the Millend Spring - the more so now since the opening up of the spring would tend to expedite the flow of the water in the fissures of the rock in the direction of the spring.

I recommend that steps be taken to pipe this sewage away and that conditions generally around the farm and buildings be tidied up. When this has been done there should be progressive diminution in the pollution of the spring water; but the improvement is likely to be slow because it will take some time for the ground and rocks to cleanse after the contamination to which they have been subjected."

The work recommended was immediately carried out and reports on subsequent samples examined are as follows:-

Date.	25.10.43	29.11.43.	11.1.44.	1.3.44.	24.4.44.
Number of Colonies per ml developing at 37°C	6	75	64	0	4
at 20.22°C	2	49	17	3	6
Probable no. of Coli-Aerogenes per 100ml	0	0	0	0	0
Remarks	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory

As a further precaution the supplies from Caswell and Millend are both chlorinated. The hard water has no plumbo-solvent action.

North Nibley.

The supply to the parish of North Nibley is from Millend and has been sufficient throughout the year.

Coaley Supply.

This supply situated at Spring Tynnings is from two springs piped to a collecting tank from which it passes into the distribution system. The quantity is sufficient but the supply is liable to intermittent pollution, as unsatisfactory reports have been received on nine samples out of sixteen submitted during the past three years. The origin of the pollution is not known but it is probably from the cesspool of a house north of Crawley Barns on the west side of the main road. The cesspool is 370 yards from the affected springs and is sunk in ground which falls sharply towards it. At the time of inspection only a small depth of sewage was found in the cesspool, which indicates that most of the sewage had disappeared by percolation.

On the 15th June 1943, I reported to the Council that the supply could not be regarded as satisfactory for a public supply and recommended the installation of a suitable chlorination plant. This recommendation was accepted and Mr. L. Richardson was again instructed to investigate from a geological standpoint and report on the origin of the pollution.

Wotton-under-Edge and Kingswood Supply.

Until 1942 Kingswood had its own supply from springs at Tor Hill and near the west side of Synwell Lane, but following the discovery of pollution the supply was diverted from the Kingswood Reservoir and the reservoir has been fed from the Wotton-under-Edge mains.

The Wotton supplies are from sixteen springs yielded by the Fuller's Earth in the vicinity of Hamlin Brake and from four springs yielded by the Cotteswold Sands at Tyley Bottom. The former supply is delivered to the reservoir by gravitation; the latter is pumped from Coombe. The quantity is insufficient and the supply was curtailed during the summer months.

Both existing supplies show signs of pollution and unsatisfactory reports have been received on 13 out of 15 samples submitted for bacteriological examinations during the year. A sample of chlorinated water taken on 2nd June was found to be satisfactory. Investigations are proceeding as to the origin of the pollution at Hamlin Brake. Pollution of the supply from the two springs near the Pumping Station at Coombe, which rise near Frogend Farm, is most likely to be caused by percolation from the farm to the conduit, for the conduit, which is of 4-inch stoneware pipes, passes close to the farm buildings. As the joints of this conduit are, no doubt, defective a new conduit of cast iron pipes should be provided in its place.

SECTION C. SUMMARY OF SANITARY INSPECTOR'S VISITS.

General Sanitation.

	No. of Visits or Inspections.
Water Supplies ...	27
Drainage ...	143
Fried Fish Shops ...	8
Factories ...	9
Workshops ...	15
Bake Houses ...	16
Public Conveniences ...	22
Refuse Collection ...	443
Refuse Disposal and Salvage	320
Rats and Mice ...	3
Schools ...	4
Shops ...	115
Miscellaneous Visits ...	102

Housing.

Under Public Health Acts:	No. of Visits or Inspections.
No. of houses inspected	22
Visits paid to above houses	23

Verminous Premises:	
No. of houses inspected	3
Visits paid to above	2

Infectious Disease.

Inquiries in cases of Infectious Disease	74
Visits re disinfection	18

Meat and Food Inspection.

Total Meat Inspection visits	16
Visits to slaughter houses	8
Visits to shops and stalls	5
Visits to other premises	2

Visits to:-	
Butchers	35
Fishmongers	28
Grocers	48
Greengrocers	32
Cowsheds	135
Dairies and Milkshops	119
Restaurants	16

Notices Served.

Informal Notices	11
Informal Notices complied with	8
Statutory Notices served	1
" " complied with	1

Unsound Food Destroyed.

Tinned Foods.	406½ lbs.
Other Foodstuffs	240½ lbs.
Meat and Sausages	533 lbs.

Milk Samples.

78 samples were taken and submitted for bacteriological examination. Results showed that 38 did not reach the accredited milk standard.

SECTION D. PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

DISEASE	Total cases Notified.	Cases admitted to Hospital.	Total Deaths.
Smallpox	-	-	-
Scarlet Fever	81	18	-
Diphtheria	6	5	-
Typhoid Fever	-	-	-
Paratyphoid Fever	-	-	-
Puerperal Pyrexia	1	-	-
Poliomyelitis	-	-	-
Pneumonia	17	-	8
Erysipelas	1	-	-
Encephalitis Lethargica	-	-	-
Cerebro Spinal Meningitis	-	-	-
Measles	541	-	-
Whooping Cough	7	-	1
Opthalmia Neonatorum	-	-	-
Food Poisoning	-	-	-

Analysis of total notified cases under age-groups:

DISEASE	Under 1 yr.	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 yrs and over	TOTAL
Smallpox	-	-	-	-	-	-	-	-	-	-	-	-	-
Scarlet Fever	-	2	3	3	8	41	12	3	8	1	-	-	81
Diphtheria	-	-	1	-	-	1	1	-	3	-	-	-	6
Typhoid Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Paratyphoid Fever	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerperal Pyrexia	-	-	-	-	-	-	-	-	1	-	-	-	1
Poliomyelitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Pneumonia	2	1	-	-	-	3	-	-	2	1	4	4	17
Erysipelas	-	-	-	-	-	-	-	-	1	-	-	-	1
Encephalitis Letharigica	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerebro-spinal Meningitis	-	-	-	-	-	-	-	-	-	-	-	-	-
Measles	8	22	39	54	49	307	45	4	8	2	3	-	541
Whooping Cough	-	1	1	1	-	3	1	-	-	-	-	-	7
Food Poisoning	-	-	-	-	-	-	-	-	-	-	-	-	-

DIPHTHERIA IMMUNISATION.

(a) Number of pre-school children immunised	256
(b) Number of school children immunised	127
(c) Number of notifications (children under the age of 15).	3
(d) Number of children included in (c) who had received a complete course of immunisation	1
(e) Number of deaths from diphtheria	0
(f) Number of deaths included in (e) in which the child is known to have completed the course of immunisation not less than 12 weeks before the onset of the disease.	0

TUBERCULOSIS.

New cases and mortality during 1943.

Age Periods	New Cases.				Deaths.			
	Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
	M.	F.	M.	F.	M.	F.	M.	F.
0 -	-	-	-	-	-	-	-	-
1 -	-	1	-	1	-	-	-	-
5 -	1	-	1	3	-	-	-	-
15 -	2	2	-	-	-	1	-	-
25 -	1	4	1	-	1	1	-	-
35 -	2	-	-	-	2	-	-	-
45 -	1	-	-	-	-	2	-	-
55 -	-	1	-	-	-	-	-	-
65 and upwards	-	-	-	-	-	-	-	-
TOTALS	7	8	2	4	3	4	-	-